Electronic Version
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Claims

[c1] 1. An apparatus for simultaneously processing waste ozone and drained water, comprising:
a process device;
an ozone generator coupled to the process device for providing ozone to the process device;
a drained water tank at least having a drained water inlet and a drained water outlet;
a gas/liquid mixing device having a gas inlet, a liquid outlet and an outlet, the liquid inlet coupled to the drained water outlet of the drained water tank, the gas inlet coupled to the ozone generator for substantially dissolving ozone into drained water;
a decomposition device coupled to the gas/liquid mixing device for decomposing organic carbon in the drained water; and
an absorption device coupled to the decomposition device for absorbing ions within the drained water.

[c2] 2. The apparatus for simultaneously processing waste ozone and drained water of claim 1, wherein the gas/liquid mixing device comprises a dissolving pump.

[c3] 3. The apparatus for simultaneously processing waste

ozone and drained water of claim 1, wherein the decomposition device comprises a UV lamp.

[c4] 4. The apparatus for simultaneously processing waste ozone and drained water of claim 1, wherein the absorption device comprises active carbon.

[c5] 5. The apparatus for simultaneously processing waste ozone and drained water of claim 1, wherein the absorption device comprises ion-exchange resin.

[c6] 6. The apparatus for simultaneously processing waste ozone and drained water of claim 1, wherein the drained water outlet of the drained water tank is coupled to a local scrubber.

[c7] 7. A method for simultaneously processing waste ozone and drained water, comprising:
collecting waste ozone and drained water of a process device;
substantially dissolving the waste ozone into the drained water;
increasing a generating ratio of the hydroxyl ions of the drained water for reducing total organic carbon of the drained water; and
absorbing ions from the drained water.

[c8] 8. The method for simultaneously processing waste

ozone and drained water of claim 7, wherein the step of substantially dissolving the waste ozone into the drained water comprises using a dissolving pump for substantially dissolving the waste ozone into the drained water.

[c9] 9. The method for simultaneously processing waste ozone and drained water of claim 7, wherein the step of increasing the generating ratio of hydroxyl ions of the drained water for reducing total organic carbon of the drained water comprises exposing the drained water by using a UV lamp to dissolve the organic carbon of the drained water.

[c10] 10. The method for simultaneously processing waste ozone and drained water of claim 7, wherein the step of absorbing ions from the drained water comprises absorbing the ions from the drained water by using active carbon.

[c11] 11. The method for simultaneously processing waste ozone and drained water of claim 7, wherein the step of absorbing ions from the drained water comprises absorbing the ions from the drained water by using ion-exchange resin.

[c12] 12. The method for simultaneously processing waste ozone and drained water of claim 7, wherein the drained

water comes from a local scrubber.

[c13] 13. The method for simultaneously processing waste ozone and drained water of claim 7, wherein the waste ozone comes from an ozone generator of a process device.